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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,961

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Toshiyuki Oga

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EXAMINER

SHEDRICK, CHARLES TERRELL

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

07/21/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/566,961

**Applicant(s)**

OGA, TOSHIYUKI

**Examiner**

CHARLES SHEDRICK

**Art Unit**

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 April 2009.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-9 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Arguments***

1. Applicant's arguments with respect to claims 1-6 have been considered but are moot in view of the new ground(s) of rejection.
2. Applicant's arguments filed 4/20/09 with respect to claims 7-9 have been fully considered but they are not persuasive.
3. With respect to independent Claim 7, In response to applicant's argument that the prior art does not teach a gravity sensor operable for detecting whether gravity is applied in a direction from a surface side of said display device to a rear surface side, ..., a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.
4. Furthermore, it is respectfully noted with respect to claim 7 that the manner of operating the device does not differentiate an apparatus claim from the prior art.-MPEP 2114 see also related topics MPEP 2121,2121.01, 716.07

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomohide et al. JP Patent Pub. No.: 07-295720 in view of Shimabukuro US Patent Pub. No.: 2003/0092400 A1.

Consider **claim 1**, Tomohide, teaches a mobile information terminal comprises a display device having a display surface disposed on the front surface (e.g., **see remarks dated 1/21/09**); a plurality of operation keys operable to detect that each of said operation keys is fully depressed (i.e., **detecting key pressing**), said operating keys being disposed on a rear surface located on a reverse side of the front surface on which the display surface of said display device is disposed (e.g., **see drawing 1 and see remarks dated 1/21/09**), finger position detecting mechanisms for detecting that a finger of an operator is placed on each of said operation keys (e.g., **see Japanese Patent Abstract, paragraphs 0016-0020**), and a control section to which signals from said operation keys and said finger position detecting mechanisms are entered and which can control the operation of said display device (e.g., **see Japanese Patent Abstract , see information processing section 4 and at least paragraph 0020**), wherein said control section executes a processing operation to cause said display device to display an image showing the arrangement of said operation keys and to change an icon which is included in the image of said

arranged operation keys and which corresponds to one of said operation keys on which the operator placed his/her finger when the control section determines, according to an input signal from said finger position detecting mechanisms, that the finger of the operator is placed on said one of operation keys (e.g., see **Japanese Patent Abstract**, see **information processing section 4** and at least **paragraphs 0016- 0020**).

However, Tomohide does not specifically teach a plurality of finger position detecting mechanisms for detecting that a finger of an operator is placed on one of said operation keys even if none of said operation keys is fully depressed.

In analogous art, Shimabukuro teaches teach a plurality of finger position detecting mechanisms for detecting that a finger of an operator is placed on one of said operation keys even if none of said operation keys is fully depressed (e.g., **key up, key down, key release, key touch vs. key pressed as noted in at least figure 5 and paragraphs 0014-0015**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Tomohide to include a plurality of finger position detecting mechanisms for detecting that a finger of an operator is placed on one of said operation keys even if none of said operation keys is fully depressed for the purpose of facilitating key operation as taught by Shimabukuro in at least paragraph 0002

Consider **claim 2 and as applied to a mobile information terminal according to claim 1**, Tomohide as modified by Shimabukuro teaches wherein each of said finger position detecting mechanisms includes a half-depressing sensor for detecting that each of said operation keys is half-depressed and/or includes a touch sensor for detecting that the finger of the operator touches each of said operation keys (e.g., see **touch sensor 8 as noted in paragraph 0032**).

Consider **claim 3** and as applied to the mobile information terminal according to **claim 1**, Tomohide as modified by Shimabukuro teaches wherein executing the processing operation to change the icon that corresponds to one of said operation keys on which the finger of the operator is placed, is executed by changing at least one of a display color, a display figure, a display brightness, and a flickering pattern in the displayed icon (e.g., see **image processing noted in paragraph 0034**).

Consider **claim 4** and as applied to the mobile information terminal according to **claim 1**, Tomohide as modified by Shimabukuro teaches wherein said control section executes a processing operation to start or stop a predetermined program stored in advance when said control section determines (e.g., see **feedback part and information processing section paragraphs 0027-0031**), according to a signal from said finger position detecting mechanisms, that the finger of the operator is placed on a predetermined key of said operation keys, or when said control section determines, according to a signal from said finger position detecting mechanisms, that the finger of the operator is sequentially placed on some of said operation keys in a predetermined order (e.g., see **feedback part and information processing section paragraphs 0027-0031**).

Consider **claim 5** and as applied to the mobile information terminal according to **claim 4**, Tomohide as modified by Shimabukuro teaches wherein at least one processing operation to display a predetermined image on said display device or to stop the display, to display predetermined selection information on said display device, to turn the light of an illuminator on or off or to cause the illuminator to flicker, to generate or to halt a vibration of a predetermined pattern, to generate or stop a sound having a predetermined pattern, to connect the

mobile information terminal to another information processing apparatus, to which the mobile information terminal can be connected through a network, or to disconnect the connection, is executed by starting or by stopping said predetermined program (e.g., see **feedback part and information processing section paragraphs 0027-0031 and PAJ abstract**).

8. Claims 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tomohide et al. JP Patent Pub. No.: 07-295720 in view of Shimabukuro US Patent Pub. No.: 2003/0092400 A1 and further in view of Bogward US Patent Pub. No.: 20040049743 A1.

Consider Claim 6 and as applied to the mobile information terminal according to **claim 1**, Tomohide as modified by Shimabukuro teaches the claimed invention except where it further comprising a gravity sensor for detecting whether gravity is applied in a direction from the front surface of said display device to the rear surface of said display device or whether gravity is applied in a opposite direction from the rear surface of display device to the front surface of display device, wherein said control section executes a processing operation to change the assignment of key codes to said operation keys, in response to an input signal from said gravity sensor.

However, in analogous art Bogward teaches a gravity sensor for detecting whether gravity is applied in a direction from a side of said display surface of said display device to the opposite side or whether gravity is applied in the opposite direction (e.g., **opposite direction considered top to bottom and or left to right**) (see at least **discussion of gravity sensor and switch in paragraphs 0327-0336**), wherein said control section executes a processing operation to change the assignment of key codes to said operation keys, in response to an input signal from said gravity sensor(i.e., **key codes would follow from the control section recognizing the**

**input from one region of the keyboard versus another region of the keyboard based on coded signals)(see at least discussion of gravity sensor and switch in paragraphs 0327-0336).**

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Tomohide as modified by Shimabukuro to include a gravity sensor for detecting whether gravity is applied in a direction from a side of said display surface of said display device to the opposite side or whether gravity is applied in the opposite direction, wherein said control section executes a processing operation to change the assignment of key codes to said operation keys, in response to an input signal from said gravity sensor for the purpose of improving functionality of mobile devices as taught by Bogward. Furthermore, it would be appreciated by a person of ordinary skill in the art that the gravity sensor detects the general position based on a point of reference (i.e., up down right left top bottom).

9. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomohide et al. JP Patent Pub. No.: 07-295720 in view of Bogward US Patent Pub. No.: 20040049743 A1.

Consider **claim 7**, Tomohide teaches a display device having a display surface disposed on the front surface (e.g., **see remarks above in response to arguments**); a plurality of operation keys on the rear surface of said display device (e.g., **see drawing 1 and response to arguments above**)

However, Tomohide does not specifically teach a gravity sensor operable for detecting whether gravity is applied in a direction from a front surface side of said display device a rear surface side or whether gravity is applied in the opposite direction, and a control section to which signals from said operation keys and said gravity sensor are entered and which can control the



operation of said display device, wherein said control section operable to execute a processing operation to cause said display device to display an image showing the arrangement of said operation keys and a processing operation to change the assignment of key codes to said operation keys in response to an input signal from said gravity sensor.

In analogous art, Bogward teaches a gravity sensor for detecting whether gravity is applied from a front surface side of said display device to a rear surface side(**i.e., the gravity sensor detects the position of the device**), or whether gravity is applied in the opposite direction(**e.g., opposite direction considered top to bottom and or left to right**) (see at least **discussion of gravity sensor and switch in paragraphs 0327-0336**), and a control section to which signals from said operation keys and said gravity sensor are entered and which can control the operation of said display device(**e.g., see at least discussion of gravity sensor and switch in paragraphs 0327-0336**), wherein said control section executes a processing operation to cause said display device to display an image showing the arrangement of said operation keys and a processing operation to change the assignment of key codes to said operation keys in response to an input signal from said gravity sensor (**i.e., key codes (i.e., signals) would follow from the control section recognizing the input from one region of the keyboard versus another region of the keyboard if the keypad displays are rotated based on coded signals**)(see at least **discussion of gravity sensor and switch in paragraphs 0327-0336**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Tomohide to include a gravity sensor operable for detecting whether gravity is applied in a direction from a front surface side of said display device a rear surface side or whether gravity is applied in the opposite direction, and a control section to which

signals from said operation keys and said gravity sensor are entered and which can control the operation of said display device, wherein said control section operable to execute a processing operation to cause said display device to display an image showing the arrangement of said operation keys and a processing operation to change the assignment of key codes to said operation keys in response to an input signal from said gravity sensor for the purpose of improving functionality of mobile devices as taught by Bogward. Furthermore, it would be appreciated by a person of ordinary skill in the art that the gravity sensor detects the general position based on a point of reference.

Consider **claims 8 and 9 and as applied to the mobile information terminal according to claim 6 and 7 respectively**, Tomohide teaches the claimed invention except wherein the arrangement of the key codes assigned to said operation keys when gravity is applied in a direction from the front surface of said display device to rear surface of said display device is a mirror image of the arrangement of the key codes assigned to said operation keys when gravity is applied in a direction from the rear side surface of said display device to the front surface of said display device.

However, In analogous art, Bogward teaches wherein the arrangement of the key codes assigned to said operation keys when gravity is applied in a direction from the front surface of said display device to rear surface of said display device is a mirror image of the arrangement of the key codes assigned to said operation keys when gravity is applied in a direction from the rear side (i.e., side opposite to the side of the display surface) of said display device to the front surface of said display device (i.e., the gravity sensor detects the position of the device and

**assigns the key codes (i.e., signals) accordingly )(see at least paragraph 0437 and claims 13-15).**

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Tomohide to include wherein the arrangement of the key codes assigned to said operation keys when gravity is applied in a direction from the front surface of said display device to rear surface of said display device is a mirror image of the arrangement of the key codes assigned to said operation keys when gravity is applied in a direction from the rear side as taught by Bogward. Furthermore, it would be appreciated by a person of ordinary skill in the art that the gravity sensor detects the general position based on a point of reference (i.e., **left handed or right handed**).

#### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES SHEDRICK whose telephone number is (571)272-8621. The examiner can normally be reached on Monday thru Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles Shedrick/  
Examiner, Art Unit 2617

/Lester Kincaid/  
Supervisory Patent Examiner, Art Unit 2617